

## SEQUENCE LISTING

<110> Roche, Andrew  
 Hansen, Martin Chr.  
 Villsen, Inge D.  
 Schrotz-King, Petra  
 Henningsen, Jeannette  
 Lund Jorgensen, Trine Louise

<120> Extracellular Aspergillus Polypeptides

<130> 13403.1003

<160> 49

<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 260  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 1  
 Met Leu Ala Ser Phe Gln Phe Cys Ile Leu Pro Arg Thr Tyr Arg Thr  
 1               5                   10                   15  
 Leu Leu Cys Ser Ala Gly Ala Gly Pro Leu Leu Ile Ile Gln Phe Val  
 20               25                   30  
 Thr Val Ala Ser Ala Leu Ala Leu Ala Pro Thr Ala Val Val Ala Arg  
 35               40                   45  
 Gln Gly Ala Ala Ala Phe Val Thr Val Asn Ser Ile Asp Val Cys Pro  
 50               55                   60  
 Lys Lys Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys Val Val Thr  
 65               70                   75                   80  
 Thr Pro Tyr Thr Cys Asp Gln Val Lys Leu Gly His Gly Leu Asp Val  
 85               90                   95  
 Ser Tyr Tyr Asn Phe Asp Ile Glu Pro Leu Thr Lys Asp Thr Phe Pro  
 100              105                   110  
 Tyr Cys Lys Ala Leu Lys Val Phe Asp Asn Glu Gly Cys Leu Gly Phe  
 115              120                   125  
 Pro Thr Leu Trp Ile Pro Leu Glu Ser Pro Leu Glu Asp Lys Cys Ile  
 130              135                   140  
 Pro Glu His Tyr Phe Ser Asp Glu Val Lys Ser Ile Ser Phe Gln Leu  
 145              150                   155                   160  
 Asp Cys Arg Glu Asp Ala Pro Val Lys Lys Glu Pro Tyr Gly Pro Lys  
 165              170                   175  
 Glu Gly Ala Glu Gln Ser Ala Pro Gln Ala Glu His Ser Thr Lys Gln  
 180              185                   190  
 Asp Ala Gln Gln Gly Ser His Gln Gly Gln Glu Val Gln Asn Ser Pro  
 195              200                   205  
 Lys Gln Glu Ala Arg Gln Gly Ser Arg Pro Ala Glu Ala Ala Pro Lys  
 210              215                   220  
 Gln Glu Gln Glu Ala Glu Gln Ala Ser Glu Ala Ala Pro Glu Lys Lys  
 225              230                   235                   240  
 Ala Ser Asn Pro Ala Asp Ser Leu Gly Leu Gly Glu Leu Thr Lys Val

BEST AVAILABLE COPY

245                    250                    255  
Leu Gly Phe Arg  
260

<210> 2  
<211> 107  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 2  
Val Arg Phe Pro Val Pro Asp Asp Ile Thr Val Lys Gln Ala Thr Glu  
1                5                10                15  
Lys Cys Gly Asp Gln Ala Gln Leu Ser Cys Cys Asn Lys Ala Thr Tyr  
20                25                30  
Ala Gly Asp Val Thr Asp Ile Asp Glu Gly Ile Leu Ala Gly Thr Leu  
35                40                45  
Lys Asn Leu Ile Gly Gly Ser Gly Thr Glu Gly Leu Gly Leu Phe  
50                55                60  
Asn Gln Cys Ser Lys Leu Asp Leu Gln Ser Pro Ile Ile Gly Ile Pro  
65                70                75                80  
Ile Gln Asp Leu Val Asn Gln Lys Cys Lys Gln Asn Ile Ala Cys Cys  
85                90                95  
Gln Asn Ser Pro Ser Asp Ala Val Arg Phe Pro  
100                105

<210> 3  
<211> 318  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 3  
Met Ala Thr Pro Lys Val Gly Ile Asn Gly Phe Gly Arg Ile Gly Arg  
1                5                10                15  
Ile Val Gly Leu Asn Ser Leu Ser His Gly Val Asp Val Val Ala Val  
20                25                30  
Asn Asp Pro Phe Ile Glu Val His Tyr Ala Ala Tyr Met Leu Lys Tyr  
35                40                45  
Asp Thr Thr His Gly Gln Phe Lys Gly Thr Ile Glu Thr Tyr Asp Gln  
50                55                60  
Gly Leu Ile Val Asn Gly Lys Ile Arg Phe Tyr Ala Glu Lys Asp  
65                70                75                80  
Pro Ser Gln Ile Pro Trp Ser Glu Thr Gly Ala Ala Tyr Ile Val Glu  
85                90                95  
Ser Thr Gly Val Phe Thr Thr Lys Glu Lys Ala Ser Ala His Leu Lys  
100                105                110  
Gly Gly Ala Lys Lys Val Ile Ile Ser Ala Pro Ser Ala Asp Ala Pro  
115                120                125  
Met Phe Val Met Gly Val Asn Asn Thr Thr Tyr Thr Ser Asp Ile Gln  
130                135                140  
Val Leu Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala  
145                150                155                160  
Lys Val Ile Asn Asp Lys Phe Gly Ile Val Glu Gly Leu Met Thr Thr  
165                170                175  
Val His Ser Tyr Thr Ala Thr Gln Lys Val Val Asp Ala Pro Ser Asn  
180                185                190  
Lys Asp Trp Arg Gly Gly Arg Thr Ala Ala Gln Asn Ile Ile Pro Ser  
195                200                205

Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Ser Leu Asn  
 210 215 220  
 Gly Lys Leu Thr Gly Met Ala Met Arg Val Pro Thr Ser Asn Val Ser  
 225 230 235 240  
 Val Val Asp Leu Thr Cys Arg Leu Glu Lys Gly Ala Ser Tyr Asp Glu  
 245 250 255  
 Ile Lys Gln Ala Ile Lys Ala Ala Ser Glu Glu Gly Glu Leu Lys Asn  
 260 265 270  
 Ile Leu Gly Tyr Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn Gly  
 275 280 285  
 Asp Glu Arg Ser Ser Ile Phe Asp Ala Lys Ala Gly Ile Ser Leu Asn  
 290 295 300  
 Pro Asn Phe Val Lys Leu Val Ala Trp Tyr Asp Asn Glu Trp  
 305 310 315

<210> 4  
 <211> 438  
 <212> PRT  
 <213> Aspergillus Fumigatus

<400> 4  
 Met Pro Ile Ser Lys Ile His Ala Arg Ser Val Tyr Asp Ser Arg Gly  
 1 5 10 15  
 Asn Pro Thr Val Glu Val Asp Val Ala Thr Glu Thr Gly Leu His Arg  
 20 25 30  
 Ala Ile Val Pro Ser Gly Ala Ser Thr Gly Gln His Glu Ala His Glu  
 35 40 45  
 Leu Arg Asp Gly Asp Lys Thr Gln Trp Gly Gly Lys Gly Val Leu Lys  
 50 55 60  
 Ala Val Lys Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys Glu  
 65 70 75 80  
 Asn Ile Asp Val Lys Asp Gln Ser Lys Val Asp Glu Phe Leu Asn Lys  
 85 90 95  
 Leu Asp Gly Thr Ala Asn Lys Ser Asn Leu Gly Ala Asn Ala Ile Leu  
 100 105 110  
 Gly Val Ser Leu Ala Val Ala Lys Ala Gly Ala Ala Glu Lys Gly Val  
 115 120 125  
 Pro Leu Tyr Ala His Ile Ser Asp Leu Ala Gly Thr Lys Lys Pro Tyr  
 130 135 140  
 Val Leu Pro Val Pro Phe Gln Asn Val Leu Asn Gly Gly Ser His Ala  
 145 150 155 160  
 Gly Gly Arg Leu Ala Phe Gln Glu Phe Met Ile Val Pro Asp Ser Ala  
 165 170 175  
 Pro Ser Phe Ser Glu Ala Leu Arg Gln Gly Ala Glu Val Tyr Gln Lys  
 180 185 190  
 Leu Lys Ala Leu Ala Lys Lys Tyr Gly Gln Ser Ala Gly Asn Val  
 195 200 205  
 Gly Asp Glu Gly Val Ala Pro Asp Ile Gln Thr Ala Glu Glu Ala  
 210 215 220  
 Leu Asp Leu Ile Thr Glu Ala Ile Glu Gln Ala Gly Tyr Thr Gly Lys  
 225 230 235 240  
 Ile Lys Ile Ala Met Asp Val Ala Ser Ser Glu Phe Tyr Lys Ala Asp  
 245 250 255  
 Val Lys Lys Tyr Asp Leu Asp Phe Lys Asn Pro Glu Ser Asp Pro Ser  
 260 265 270  
 Lys Trp Leu Thr Tyr Glu Gln Leu Ala Asp Leu Tyr Lys Ser Leu Ala  
 275 280 285

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Tyr | Pro | Ile | Val | Ser | Ile | Glu | Asp | Pro | Phe | Ala | Glu | Asp | Asp |
| 290 |     |     |     | 295 |     |     |     |     |     |     | 300 |     |     |     |     |
| Trp | Glu | Ala | Trp | Ser | Tyr | Phe | Tyr | Lys | Thr | Ser | Asp | Phe | Gln | Ile | Val |
| 305 |     |     |     |     | 310 |     |     |     | 315 |     |     |     |     |     | 320 |
| Gly | Asp | Asp | Leu | Thr | Val | Thr | Asn | Pro | Gly | Arg | Ile | Lys | Lys | Ala | Ile |
|     |     |     |     |     |     |     |     |     | 325 |     | 330 |     |     |     | 335 |
| Glu | Leu | Lys | Ser | Cys | Asn | Ala | Leu | Leu | Lys | Val | Asn | Gln | Ile | Gly |     |
|     |     |     |     |     |     |     |     |     | 340 |     | 345 |     |     |     | 350 |
| Thr | Leu | Thr | Glu | Ser | Ile | Gln | Ala | Ala | Lys | Asp | Ser | Tyr | Ala | Asp | Asn |
|     |     |     |     |     |     |     |     |     | 355 |     | 360 |     |     |     | 365 |
| Trp | Gly | Val | Met | Val | Ser | His | Arg | Ser | Gly | Glu | Thr | Glu | Asp | Val | Thr |
|     |     |     |     |     |     |     |     |     | 370 |     | 375 |     |     |     | 380 |
| Ile | Ala | Asp | Ile | Ala | Val | Gly | Leu | Arg | Ser | Gly | Gln | Ile | Lys | Thr | Gly |
| 385 |     |     |     |     |     |     |     |     | 390 |     | 395 |     |     |     | 400 |
| Ala | Pro | Cys | Arg | Ser | Glu | Arg | Leu | Ala | Lys | Leu | Asn | Gln | Ile | Leu | Arg |
|     |     |     |     |     |     |     |     |     | 405 |     | 410 |     |     |     | 415 |
| Ile | Glu | Glu | Glu | Leu | Gly | Glu | Asn | Thr | Val | Tyr | Ala | Gly | Ser | Lys | Phe |
|     |     |     |     |     |     |     |     |     | 420 |     | 425 |     |     |     | 430 |
| Arg | Thr | Ala | Val | Asn | Leu |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 435 |

<210> 5  
<211> 728  
<212> PRT  
<213> Aspergillus Fumigatus

|       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> | 5   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Met   | Arg | Leu | Thr | Phe | Ile | Pro | Ser | Leu | Ile | Gly | Val | Ala | Asn | Ala | Val |
| 1     |     |     |     |     |     |     |     |     | 5   |     | 10  |     |     |     | 15  |
| Cys   | Pro | Tyr | Met | Thr | Gly | Glu | Leu | Asn | Arg | Arg | Asp | Glu | Ile | Ser | Asp |
|       |     |     |     |     |     |     |     |     | 20  |     | 25  |     |     |     | 30  |
| Gly   | Asp | Ala | Ala | Ala | Ala | Thr | Glu | Glu | Phe | Leu | Ser | Gln | Tyr | Tyr | Leu |
|       |     |     |     |     |     |     |     |     | 35  |     | 40  |     |     |     | 45  |
| Asn   | Asp | Asn | Asp | Ala | Phe | Met | Thr | Ser | Asp | Val | Gly | Gly | Pro | Ile | Glu |
|       |     |     |     |     |     |     |     |     | 50  |     | 55  |     |     |     | 60  |
| Asp   | Gln | Asn | Ser | Leu | Ser | Ala | Gly | Glu | Arg | Gly | Pro | Thr | Leu | Leu | Glu |
|       |     |     |     |     |     |     |     |     | 65  |     | 70  |     |     |     | 80  |
| Asp   | Phe | Ile | Phe | Arg | Gln | Lys | Ile | Gln | Arg | Phe | Asp | His | Glu | Arg | Val |
|       |     |     |     |     |     |     |     |     | 85  |     | 90  |     |     |     | 95  |
| Pro   | Glu | Arg | Ala | Val | His | Ala | Arg | Gly | Ala | Gly | Ala | His | Gly | Val | Phe |
|       |     |     |     |     |     |     |     |     | 100 |     | 105 |     |     |     | 110 |
| Thr   | Ser | Tyr | Gly | Asp | Phe | Ser | Asn | Ile | Thr | Ala | Ala | Ser | Phe | Leu | Ala |
|       |     |     |     |     |     |     |     |     | 115 |     | 120 |     |     |     | 125 |
| Lys   | Glu | Gly | Lys | Gln | Thr | Pro | Val | Phe | Val | Arg | Phe | Ser | Thr | Val | Ala |
|       |     |     |     |     |     |     |     |     | 130 |     | 135 |     |     |     | 140 |
| Gly   | Ser | Arg | Gly | Ser | Ser | Asp | Leu | Ala | Arg | Asp | Val | His | Gly | Phe | Ala |
|       |     |     |     |     |     |     |     |     | 145 |     | 150 |     |     |     | 160 |
| Thr   | Arg | Phe | Tyr | Thr | Asp | Glu | Gly | Asn | Phe | Asp | Ile | Val | Gly | Asn | Asn |
|       |     |     |     |     |     |     |     |     | 165 |     | 170 |     |     |     | 175 |
| Ile   | Pro | Val | Phe | Phe | Ile | Gln | Asp | Ala | Ile | Leu | Phe | Pro | Asp | Leu | Ile |
|       |     |     |     |     |     |     |     |     | 180 |     | 185 |     |     |     | 190 |
| His   | Ala | Val | Lys | Pro | Arg | Gly | Asp | Asn | Glu | Ile | Pro | Gln | Ala | Ala | Thr |
|       |     |     |     |     |     |     |     |     | 195 |     | 200 |     |     |     | 205 |
| Ala   | His | Asp | Ser | Ala | Trp | Asp | Phe | Phe | Ser | Gln | Gln | Pro | Ser | Thr | Met |
|       |     |     |     |     |     |     |     |     | 210 |     | 215 |     |     |     | 220 |
| His   | Thr | Leu | Leu | Trp | Ala | Met | Ser | Gly | His | Gly | Ile | Pro | Arg | Ser | Phe |
|       |     |     |     |     |     |     |     |     | 225 |     | 230 |     |     |     | 240 |

Arg His Val Asp Gly Phe Gly Val His Thr Phe Arg Phe Val Thr Asp  
                   245                  250                  255  
 Asp Gly Ala Ser Lys Leu Val Lys Phe His Trp Lys Ser Leu Gln Gly  
                   260                  265                  270  
 Lys Ala Ser Met Val Trp Glu Glu Ala Gln Gln Thr Ser Gly Lys Asn  
                   275                  280                  285  
 Pro Asp Phe Met Arg Gln Asp Leu His Asp Ala Ile Glu Ala Gly Arg  
                   290                  295                  300  
 Tyr Pro Glu Trp Glu Leu Gly Val Gln Ile Met Asp Glu Glu Asp Gln  
                   305                  310                  315                  320  
 Leu Arg Phe Gly Phe Asp Leu Leu Asp Pro Thr Lys Ile Val Pro Glu  
                   325                  330                  335  
 Glu Phe Val Pro Ile Thr Lys Leu Gly Lys Met Gln Leu Asn Arg Asn  
                   340                  345                  350  
 Pro Arg Asn Tyr Phe Ala Glu Thr Glu Gln Val Met Phe Gln Pro Gly  
                   355                  360                  365  
 His Ile Val Arg Gly Val Asp Phe Thr Glu Asp Pro Leu Leu Gln Gly  
                   370                  375                  380  
 Arg Leu Phe Ser Tyr Leu Asp Thr Gln Leu Asn Arg His Gly Gly Pro  
                   385                  390                  395                  400  
 Asn Phe Glu Gln Leu Pro Ile Asn Gln Pro Arg Val Pro Val His Asn  
                   405                  410                  415  
 Asn Asn Arg Asp Gly Ala Gly Gln Met Phe Ile Pro Leu Asn Pro His  
                   420                  425                  430  
 Ala Tyr Ser Pro Lys Thr Ser Val Asn Gly Ser Pro Lys Gln Ala Asn  
                   435                  440                  445  
 Gln Thr Val Gly Asp Gly Phe Phe Thr Ala Pro Gly Arg Thr Thr Ser  
                   450                  455                  460  
 Gly Lys Leu Val Arg Ala Val Ser Ser Ser Phe Glu Asp Val Trp Ser  
                   465                  470                  475                  480  
 Gln Pro Arg Leu Phe Tyr Asn Ser Leu Val Pro Ala Glu Lys Gln Phe  
                   485                  490                  495  
 Val Ile Asp Ala Ile Arg Phe Glu Asn Ala Asn Val Lys Ser Pro Val  
                   500                  505                  510  
 Val Lys Asn Asn Val Ile Gln Leu Asn Arg Ile Asp Asn Asp Leu  
                   515                  520                  525  
 Ala Arg Arg Val Ala Arg Ala Ile Gly Val Ala Glu Pro Glu Pro Asp  
                   530                  535                  540  
 Pro Thr Phe Tyr His Asn Asn Lys Thr Ala Asp Val Gly Thr Phe Gly  
                   545                  550                  555                  560  
 Thr Lys Leu Lys Lys Leu Asp Gly Leu Lys Val Gly Val Leu Gly Ser  
                   565                  570                  575  
 Val Gln His Pro Gly Ser Val Glu Gly Ala Ser Thr Leu Arg Asp Arg  
                   580                  585                  590  
 Leu Lys Asp Asp Gly Val Asp Val Val Leu Val Ala Glu Arg Leu Ala  
                   595                  600                  605  
 Asp Gly Val Asp Gln Thr Tyr Ser Thr Ser Asp Ala Ile Gln Phe Asp  
                   610                  615                  620  
 Ala Val Val Val Ala Ala Gly Ala Glu Ser Leu Phe Ala Ala Ser Ser  
                   625                  630                  635                  640  
 Phe Thr Gly Gly Ser Ala Asn Ser Ala Ser Gly Ala Ser Ser Leu Tyr  
                   645                  650                  655  
 Pro Thr Gly Arg Pro Leu Gln Ile Leu Ile Asp Gly Phe Arg Phe Gly  
                   660                  665                  670  
 Lys Thr Val Gly Ala Leu Gly Ser Gly Thr Ala Ala Leu Arg Asn Ala  
                   675                  680                  685

Gly Ile Ala Thr Ser Arg Asp Gly Val Tyr Val Ala Gln Ser Val Thr  
 690 695 700  
 Asp Asp Phe Ala Asn Asp Leu Lys Glu Gly Leu Arg Thr Phe Lys Phe  
 705 710 715 720  
 Leu Asp Arg Phe Pro Val Asp His  
 725

<210> 6  
 <211> 749  
 <212> PRT  
 <213> Aspergillus Fumigatus

<400> 6  
 Met Ala Thr Lys Ile Ala Gly Gly Leu His Arg Ala Gln Glu Val Leu  
 1 5 10 15  
 Gln Asn Thr Ser Ser Lys Ser Lys Leu Val Asp Leu Glu Arg Asp  
 20 25 30  
 Thr Ala Asp Ala His Thr Gln Gln Pro Leu Thr Thr Asp His Gly Val  
 35 40 45  
 Arg Val Ser Asn Thr Asp Gln Trp Leu Arg Val Thr Asn Asp Arg Arg  
 50 55 60  
 Thr Gly Pro Ser Leu Leu Asp Gln Ile Ala Arg Glu Lys Ile His  
 65 70 75 80  
 Arg Phe Asp His Glu Arg Ile Pro Glu Arg Val Val His Ala Arg Gly  
 85 90 95  
 Thr Gly Ala Phe Gly Asn Phe Lys Leu Lys Glu Ser Ile Glu Asp Leu  
 100 105 110  
 Thr Tyr Ala Gly Val Leu Thr Asp Thr Ser Arg Asn Thr Pro Val Phe  
 115 120 125  
 Val Arg Phe Ser Thr Val Gln Gly Ser Arg Gly Ser Ala Asp Thr Val  
 130 135 140  
 Arg Asp Val Arg Gly Phe Ala Val Lys Phe Tyr Thr Asp Glu Gly Asn  
 145 150 155 160  
 Trp Asp Ile Val Gly Asn Asn Ile Pro Val Phe Phe Ile Gln Asp Ala  
 165 170 175  
 Val Lys Phe Pro Asp Phe Val His Ala Val Lys Pro Glu Pro His Asn  
 180 185 190  
 Glu Val Pro Gln Ala Gln Thr Ala His Asn Asn Phe Trp Asp Phe Val  
 195 200 205  
 Tyr Leu His Pro Glu Ala Thr His Met Phe Met Trp Ala Met Ser Asp  
 210 215 220  
 Arg Ala Ile Pro Arg Ser Tyr Arg Met Met Gln Gly Phe Gly Val Asn  
 225 230 235 240  
 Thr Phe Ala Leu Val Asn Lys Glu Gly Lys Arg His Phe Val Lys Phe  
 245 250 255  
 His Trp Ile Pro His Leu Gly Val His Ser Leu Val Trp Asp Glu Ala  
 260 265 270  
 Leu Lys Leu Gly Gly Gln Asp Pro Asp Phe His Arg Lys Asp Leu Met  
 275 280 285  
 Glu Ala Ile Asp Asn Lys Ala Tyr Pro Lys Trp Asp Phe Ala Ile Gln  
 290 295 300  
 Val Ile Pro Glu Glu Lys Gln Asp Asp Phe Glu Phe Asp Ile Leu Asp  
 305 310 315 320  
 Ala Thr Lys Ile Trp Pro Glu Asn Leu Val Pro Leu Arg Val Ile Gly  
 325 330 335  
 Glu Leu Glu Leu Asn Arg Asn Val Asp Glu Phe Phe Pro Gln Thr Glu  
 340 345 350

Gln Val Ala Phe Cys Thr Ser His Ile Val Pro Gly Ile Asp Phe Thr  
     355                       360                       365  
 Asp Asp Pro Leu Leu Gln Gly Arg Asn Phe Ser Tyr Phe Asp Thr Gln  
     370                       375                       380  
 Ile Ser Arg Leu Gly Ile Asn Trp Glu Glu Leu Pro Ile Asn Arg Pro  
     385                       390                       395                       400  
 Val Cys Pro Val Leu Asn His Asn Arg Asp Gly Gln Met Arg His Arg  
     405                       410                       415  
 Ile Thr Gln Gly Thr Val Asn Tyr Trp Pro Asn Arg Phe Glu Ala Val  
     420                       425                       430  
 Pro Pro Thr Gly Thr Lys Gly Ser Gly Val Gly Gly Phe Thr Thr  
     435                       440                       445  
 Tyr Pro Gln Arg Val Glu Gly Ile Lys Asn Arg Ala Leu Asn Asp Lys  
     450                       455                       460  
 Phe Arg Glu His His Asn Gln Ala Gln Leu Phe Tyr Asn Ser Met Ser  
     465                       470                       475                       480  
 Glu His Glu Lys Leu His Met Lys Lys Ala Phe Ser Phe Glu Leu Asp  
     485                       490                       495  
 His Cys Asp Asp Pro Thr Val Tyr Glu Arg Leu Ala Gly His Arg Leu  
     500                       505                       510  
 Ala Glu Ile Asp Leu Glu Leu Ala Gln Lys Val Ala Glu Met Val Gly  
     515                       520                       525  
 Ala Pro Ile Pro Ala Lys Ala Leu Lys Gln Asn His Gly Arg Arg Ala  
     530                       535                       540  
 Pro His Leu Ser Gln Thr Glu Phe Ile Pro Lys Asn Pro Thr Ile Ala  
     545                       550                       555                       560  
 Ser Arg Arg Ile Ala Ile Ile Gly Asp Gly Tyr Asp Pro Val Ala  
     565                       570                       575  
 Ser Thr Gly Leu Lys Thr Ala Ile Lys Ala Ala Ser Ala Leu Pro Phe  
     580                       585                       590  
 Ile Ile Gly Thr Lys Arg Ser Ala Ile Tyr Ala Thr Glu Asp Lys Thr  
     595                       600                       605  
 Ser Ser Lys Gly Ile Ile Pro Asp His His Tyr Asp Gly Gln Arg Ser  
     610                       615                       620  
 Thr Met Phe Asp Ala Thr Phe Ile Pro Gly Gly Pro His Val Ala Thr  
     625                       630                       635                       640  
 Leu Arg Gln Asn Gly Gln Ile Lys Tyr Trp Ile Ser Glu Thr Phe Gly  
     645                       650                       655  
 His Leu Lys Ala Leu Gly Ala Thr Gly Glu Ala Val Asp Leu Val Lys  
     660                       665                       670  
 Glu Thr Leu Ser Gly Thr Leu His Val Gln Val Ala Ser Ser Gln Ser  
     675                       680                       685  
 Pro Glu Pro Val Glu Trp Tyr Gly Val Val Thr Ala Gly Gly Lys Gln  
     690                       695                       700  
 Lys Pro Glu Ser Phe Lys Glu Ser Val Gln Ile Leu Lys Gly Ala Thr  
     705                       710                       715                       720  
 Asp Phe Val Gly Lys Phe Phe Tyr Gln Ile Ser Gln His Arg Asn Tyr  
     725                       730                       735  
 Gln Arg Glu Leu Asp Gly Leu Ala Ser Thr Ile Ala Phe  
     740                       745

<210> 7  
 <211> 16  
 <212> PRT  
 <213> Aspergillus Fumigatus

<400> 7

Lys Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys Val Val Thr Thr  
1 5 10 15

<210> 8  
<211> 16  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 8  
Lys Glu Gly Ala Glu Gln Ser Ala Pro Gln Ala Glu His Ser Thr Lys  
1 5 10 15

<210> 9  
<211> 17  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 9  
Pro Val Pro Asp Asp Ile Thr Val Lys Gln Ala Thr Glu Lys Cys Gly  
1 5 10 15  
Asp

<210> 10  
<211> 15  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 10  
Ala Thr Tyr Ala Gly Asp Val Thr Asp Ile Asp Glu Gly Ile Leu  
1 5 10 15

<210> 11  
<211> 16  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 11  
Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn Gly Asp Glu Arg Ser  
1 5 10 15

<210> 12  
<211> 18  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 12  
Phe Lys Gly Thr Ile Glu Thr Tyr Asp Gln Gly Leu Ile Val Asn Gly  
1 5 10 15  
Lys Lys

<210> 13  
<211> 17  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 13  
Lys Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys Glu Asn Ile  
1 5 10 15  
Asp

<210> 14  
<211> 18  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 14  
Thr Ser Asp Phe Gln Ile Val Gly Asp Asp Leu Thr Val Thr Asn Pro  
1 5 10 15  
Gly Arg

<210> 15  
<211> 20  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 15  
Asp Glu Glu Asp Gln Leu Arg Phe Gly Phe Asp Leu Leu Asp Pro Thr  
1 5 10 15  
Lys Ile Val Pro  
20

<210> 16  
<211> 16  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 16  
Arg Ile Asp Asn Asp Leu Ala Arg Arg Val Ala Arg Ala Ile Gly Val  
1 5 10 15

<210> 17  
<211> 12  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 17  
Lys Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys  
1 5 10

<210> 18  
<211> 10  
  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 18  
Phe Pro Val Pro Asp Asp Ile Thr Val Lys  
1 5 10

<210> 19

<211> 20  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 19  
Ala Thr Tyr Ala Gly Asp Val Thr Asp Ile Asp Glu Gly Ile Leu Ala  
1 5 10 15  
Gly Thr Leu Lys  
20

<210> 20  
<211> 11  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 20  
Ala Gly Ile Ser Leu Asn Pro Asn Phe Val Lys  
1 5 10

<210> 21  
<211> 15  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 21  
Thr Ala Ala Gln Asn Ile Ile Pro Ser Ser Thr Gly Ala Ala Lys  
1 5 10 15

<210> 22  
<211> 20  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 22  
Asn Ile Leu Gly Tyr Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn  
1 5 10 15  
Gly Asp Glu Arg  
20

<210> 23  
<211> 12  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 23  
Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys  
1 5 10

<210> 24  
<211> 15  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 24  
Val Asn Gln Ile Gly Thr Leu Thr Glu Ser Ile Gln Ala Ala Lys  
1 5 10 15

<210> 25  
<211> 12  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 25  
Trp Leu Thr Tyr Glu Gln Leu Ala Asp Leu Tyr Lys  
1 5 10

<210> 26  
<211> 11  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 26  
Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys  
1 5 10

<210> 27  
<211> 10  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 27  
Phe Gly Phe Asp Leu Leu Asp Pro Thr Lys  
1 5 10

<210> 28  
<211> 9  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 28  
Ser Ile Ser Phe Gln Leu Asp Cys Arg  
1 5

<210> 29  
<211> 15  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 29  
Glu Gly Ala Glu Gln Ser Ala Pro Gln Ala Glu His Ser Thr Lys  
1 5 10 15

<210> 30  
<211> 12  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 30  
Val Val Thr Thr Pro Tyr Thr Cys Asp Gln Val Lys  
1 5 10

<210> 31  
<211> 14

<212> PRT  
<213> Aspergillus Fumigatus

<400> 31  
Val Pro Thr Ser Asn Val Ser Val Val Asp Leu Thr Cys Arg  
1 5 10

<210> 32  
<211> 9  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 32  
Tyr Asp Thr Thr His Gly Gln Phe Lys  
1 5

<210> 33  
<211> 15  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 33  
Gly Thr Ile Glu Thr Tyr Asp Gln Gly Leu Ile Val Asn Gly Lys  
1 5 10 15

<210> 34  
<211> 12  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 34  
Thr Gly Pro Ser Leu Leu Glu Asp Gln Ile Ala Arg  
1 5 10

<210> 35  
<211> 172  
<212> PRT  
<213> Aspergillus Fumigatus

<400> 35  
Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala Lys Val  
1 5 10 15  
Ile Asn Asp Lys Phe Gly Ile Val Glu Gly Leu Met Thr Thr Val His  
20 25 30  
Ser Tyr Thr Ala Thr Gln Lys Val Val Asp Ala Pro Ser Asn Lys Asp  
35 40 45  
Trp Arg Gly Gly Arg Thr Ala Ala Gln Asn Ile Ile Pro Ser Ser Thr  
50 55 60  
Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Ser Leu Asn Gly Lys  
65 70 75 80  
Leu Thr Gly Met Ala Met Arg Val Pro Thr Ser Asn Val Ser Val Val  
85 90 95  
Asp Leu Thr Cys Arg Leu Glu Lys Gly Ala Ser Tyr Asp Glu Ile Lys  
100 105 110  
Gln Ala Ile Lys Ala Ala Ser Glu Glu Gly Glu Leu Lys Asn Ile Leu  
115 120 125  
Gly Tyr Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn Gly Asp Glu

|   |     |     |
|---|-----|-----|
| 130   | 135 | 140 |
| Arg Ser Ser Ile Phe Asp Ala Lys Ala Gly Ile Ser Leu Asn Pro Asn |     |     |
| 145   | 150 | 155 |
| Phe Val Lys Leu Val Ala Trp Tyr Asp Asn Glu Trp                 |     |     |
| 165   | 170 |     |

<210> 36  
<211> 368  
<212> PRT  
<213> *Aspergillus Fumigatus*

<220>  
<221> VARIANT  
<222> (1)...(368)  
<223> Xaa = Any Amino Acid

|   |     |     |
|---|-----|-----|
| <400> 36  |     |     |
| Met Val Thr Thr Tyr Asn Ile Leu Val Leu Pro Gly Asp Gly Ile Gly |     |     |
| 1   | 5   | 10  |
| Pro Glu Val Met Thr Glu Ala Val Lys Val Leu Lys Val Phe Glu Asn |     |     |
| 20  | 25  | 30  |
| Glu His Arg Lys Phe Asn Leu Arg Gln Glu Leu Ile Gly Gly Cys Ser |     |     |
| 35  | 40  | 45  |
| Ile Asp Ala His Gly Lys Ser Val Thr Glu Glu Val Lys Lys Ala Ala |     |     |
| 50  | 55  | 60  |
| Leu Glu Ser Asp Ala Val Leu Phe Ala Ala Val Gly Gly Pro Lys Trp |     |     |
| 65  | 70  | 75  |
| Asp His Ile Arg Arg Gly Leu Asp Gly Pro Glu Gly Gly Leu Leu Gln |     |     |
| 85  | 90  | 95  |
| Leu Arg Lys Ala Met Asp Ile Tyr Ala Asn Leu Arg Pro Cys Ser Ala |     |     |
| 100   | 105 | 110 |
| Ser Ser Pro Ser Ala Ser Ile Ala Lys Glu Phe Ser Pro Phe Arg Gln |     |     |
| 115   | 120 | 125 |
| Glu Val Ile Glu Gly Val Asp Phe Val Val Val Arg Glu Asn Cys Gly |     |     |
| 130   | 135 | 140 |
| Gly Ala Tyr Phe Gly Lys Ile Glu Glu Glu Asp Tyr Ala Met Asp     |     |     |
| 145   | 150 | 155 |
| Glu Trp Gly Tyr Ser Glu Arg Glu Ile Gln Arg Ile Thr Arg Leu Xaa |     |     |
| 165   | 170 | 175 |
| Ala Glu Xaa Ala Leu Arg His Asn Pro Pro Trp Pro Val Ile Ser Leu |     |     |
| 180   | 185 | 190 |
| Asp Lys Ala Asn Val Leu Ala Ser Ser Arg Leu Trp Arg Arg Val Val |     |     |
| 195   | 200 | 205 |
| Glu Lys Thr Met Thr Thr Glu Tyr Pro Gln Val Lys Leu Val His Gln |     |     |
| 210   | 215 | 220 |
| Leu Ala Asp Ser Ala Ser Leu Ile Leu Ala Thr Asn Pro Arg Ala Leu |     |     |
| 225   | 230 | 235 |
| Asn Gly Val Ile Leu Ala Asp Asn Thr Phe Gly Asp Met Ile Ser Asp |     |     |
| 245   | 250 | 255 |
| Gln Ala Gly Ser Ile Val Gly Thr Leu Gly Val Leu Pro Ser Ala Ser |     |     |
| 260   | 265 | 270 |
| Leu Asp Gly Leu Pro Ser Glu Thr Arg Lys Arg Thr Asn Gly Leu Tyr |     |     |
| 275   | 280 | 285 |
| Glu Pro Thr His Gly Ser Ala Pro Thr Ile Ala Gly Gln Asn Ile Ala |     |     |
| 290   | 295 | 300 |
| Asn Pro Val Ala Met Ile Leu Cys Val Ala Leu Met Phe Arg Tyr Ser |     |     |
| 305   | 310 | 315 |
|   |     | 320 |

Leu Asp Met Glu Thr Glu Ala Gln Arg Ile Glu Lys Ala Val Gln Gly  
                   325                  330                  335  
 Val Leu Asp Ala Gly Ile Arg Thr Pro Asp Leu Gly Gly Lys Ser Gly  
                   340                  345                  350  
 Thr Asn Glu Val Gly Asp Ala Ile Val Ala Ala Leu Gln Gly Ser Ser  
                   355                  360                  365

<210> 37  
 <211> 8  
 <212> PRT  
 <213> Aspergillus Fumigatus

<220>  
 <221> VARIANT  
 <222> (1)...(8)  
 <223> Xaa = Any Amino Acid

<400> 37  
 Leu Xaa Ala Glu Xaa Ala Leu Arg  
   1                  5

<210> 38  
 <211> 1226  
 <212> DNA  
 <213> Aspergillus Fumigatus

<220>  
 <221> misc\_feature  
 <222> (1)...(1226)  
 <223> n = A,T,C or G

<400> 38

|            |             |             |            |            |            |      |
|------------|-------------|-------------|------------|------------|------------|------|
| atgttaacta | cttacaacat  | cctcgccctc  | cccggcgatg | ggatcggtcc | cgaggcatg  | 60   |
| accgaagcgg | tcaaggctgct | aaaggtctt   | gagaacgagc | accgaaagt  | caacctccgg | 120  |
| caagagctca | tcggcggttg  | cagcatcgat  | ggcacggaa  | aatccgtcac | agaagaagt  | 180  |
| aaaaaggccg | ctctggaaatc | cgacgcccgtg | ctcttcgcag | cagtcggagg | tcccaaatgg | 240  |
| gaccatatcc | gtcggtgtct  | tgacgggccc  | gagggaggcc | tgctgcagct | ccgcaaggcg | 300  |
| atggacatct | acgogaatct  | caggccgtgc  | tcggccagtt | cggcagatgc | gtcgatcg   | 360  |
| aaggagttt  | gccccattccg | ccaggaagt   | atcgaggcg  | tagatttcgt | cgtggtgagg | 420  |
| gagaactgcg | ggggagcgt   | tttcgggaag  | aagatcgaag | aagaagatta | ttgtacgtcg | 480  |
| tttttaacaa | gcagtatgt   | ttcgagact   | actgtgttat | ttcagcgat  | gacgaatgg  | 540  |
| gctatacgca | gcgcgagatc  | cagcgcatca  | ccgcctcn   | ngcgaannn  | gccctccgtc | 600  |
| acaacccccc | ctggcccg    | atccctgg    | acaaagccaa | tgtgctcgcc | tcgtcg     | 660  |
| tctggccgc  | cgtcg       | tttgcgtt    | aagaccat   | ccactgagta | tcccaggt   | 720  |
| accagctggc | agactcagca  | tcgctgattc  | tagcgacca  | cccgccggca | ttgaacgg   | 780  |
| tcatcttggc | tgacaacaca  | ttcggcgaca  | tgatttctga | ccaggccggt | tccatcg    | 840  |
| ggacattggg | cgtcg       | tttccgttccc | atgtccagtc | tcgatggact | acccagt    | 900  |
| ggacaaatgg | tctgtacgag  | ccgacccat   | gatctgcacc | gacgtacgtt | tcttc      | 960  |
| ttacccgaat | tatcatgtt   | cactgaagca  | agctgacaat | catctgcaga | attgcgg    | 1020 |
| agaacatcgc | caaccccg    | tttccgtt    | gcatgatcc  | tctgtgtgc  | tctcatgtt  | 1080 |
| tagacatgga | gaccgaggcg  | caacggat    | aaaaagcagt | gcagggtgtt | cgctattcg  | 1140 |
| ggatccgcac | ccctgatct   | ggtggaaat   | cggggacaa  | tgaagttgg  | gtgcattt   | 1200 |
| ttgtcg     | gcagggtagt  | tcataa      |            |            |            | 1226 |

<210> 39  
 <211> 1107  
 <212> DNA

<213> Aspergillus Fumigatus

<220>

<221> misc\_feature

<222> (1)...(1107)

<223> n = A,T,C or G

<400> 39

|   |      |
|---|------|
| atgttaacta cttacaacat cctcgccctc cccggcgatg ggatcggtcc cgaggcatg    | 60   |
| accgaagcgg tcaagggtctt aaaggcttt gagaacgagc accgaaagt caacccgg      | 120  |
| caagagctca tcggcggttg cagcatcgat ggcacggaa aatccgtcac agaagaagt     | 180  |
| aaaaaggccg ctctggaaatc cgacgcccgtg ctcttcgcag cagtcggagg tcccaaatgg | 240  |
| gaccatatacc gtcgtggct tgacgggccc gagggaggcc tgctgcagct ccgcaaggcg   | 300  |
| atggacatct acgcgaatct caggccgtgc tcggccagtt cgccgagtgc gtcgatcg     | 360  |
| aaggagttt gccccattccg ccaggaagt atcgaggcg tagatttcgt cgtggtgagg     | 420  |
| gagaactgcg ggggagcgta tttcgaaaag aagatcgaag aagaagatta tgcgatggac   | 480  |
| aatggggct atagcgagcg cgagatcccg cgcatcaccc gcctcnngc ggaannngcc     | 540  |
| ctccgtcaca accccccctg gccgtcatc tccctggaca aagccaatgt gtcgcctcg     | 600  |
| tcgcggctct ggcggcgcgt cgttggaaag accatgacca ctgagttacc ccaggtaag    | 660  |
| ctcggtcacc agctggcaga ctcagcatcg ctgattctag cgaccaaccc gcggcattt    | 720  |
| aacggtgtca tcttggctga caacacattt ggcgacatga ttctgacca ggccgggttcc   | 780  |
| atcgctggaa cattggcgt gcttcccgat gccagtctcg atggactacc cagtggaaaca   | 840  |
| agaaagcggg caaatggctt gtacgagccg accatggat ctgcaccgc gattgcggc      | 900  |
| cagaacatcg ccaacccgt tgccatgatc ctctgtgtgg ctctcatgtt ccgttattcg    | 960  |
| ctagacatgg agaccgaggc gcaacggatc gaaaaacggat tgcaagggtgt tcttgatgcc | 1020 |
| gggatccgca cccctgatct gggtggaaa tcggggacga atgaagttgg ggtatgcatt    | 1080 |
| tttgcgtcgat tgcaggtag ttatcaa                                       | 1107 |

<210> 40

<211> 1093

<212> DNA

<213> Aspergillus Fumigatus

<400> 40

|   |      |
|---|------|
| atggcgcat ataacattgt cgtttcgct ggggaccact gtggtccgga ggtaagttcg     | 60   |
| gtctcgccg tcatcgagaa gtgcgtgac gatgtaccc tcaacccca ggatcaattt       | 120  |
| ctcggtgggt taagttcgat cgatgtacc ggttccccc ttaccgacga agctttaac      | 180  |
| gccgc当地 aacgcgtgc cgttccctc ggtgcatttgc ggcgtccaa atggggact         | 240  |
| ggccgcgtcc gccccgaaaca gggcctcctc cgtctgcgcg aggatgggg cacattcg     | 300  |
| aacctccccc cctgcaactt cccgcggcc tcgctggcg acggctcccc tctccgc        | 360  |
| gaagtctgcc gcccgtcga ctcaacatt atccgcgaaatc tgaccggatgg catctactt   | 420  |
| ggcgaccgcg aggaggacga cgccagcggc ttgcctatgg acacggagcc gtactccgc    | 480  |
| gcggagatcg agcgcatcac ccccttgcg gcccaccccg ctctgcagca caacccccc     | 540  |
| cttcccggtt ggagcttggca caaggccaaatc gtcctcgca cgagccggct gtggcggaa  | 600  |
| accgtgacgg aggtcatggc caaggatgtt ccccgatca aggtggagca ccagcttatt    | 660  |
| gactccgcgg ccatgatcat ggtcaaggatc cctagaaaatc ttaacggat tttgttact   | 720  |
| agcaacctgt tcgggtgacat catcgatgtt gaagccagcg ttatccctgg ttctctgg    | 780  |
| ctttgcggca ggcgaagctt gagcggcatt cctgacggaa agaccaaggat caatggatc   | 840  |
| tatgagccta ttacggttgc tggccctgac attgcccggca agggcatcgta taacccgtc  | 900  |
| ggccgcattt tctctgtcgc catgtatgtt cagttactccc tgaaccgtat ggatgacgc   | 960  |
| aggccatcg agacggccgtt ccgcaatgtt atcgaggccg gtatccgcac tgccgatatt   | 1020 |
| ggcgccatcg cgacaactatcg cgaggtcggt gacgctgttgc tgccgagct ggagaagctg | 1080 |
| tttgcgtcgat tgcaggtag ttatcaa                                       | 1093 |

<210> 41

<211> 363

<212> PRT

<213> Aspergillus Fumigatus

<400> 41

Met Pro Ser Tyr Asn Ile Val Val Phe Ala Gly Asp His Cys Gly Pro  
1 5 10 15  
Glu Val Ser Ser Val Leu Arg Val Ile Glu Lys Cys Arg Asp Asp Ala  
20 25 30  
Thr Phe Asn Leu Gln Asp Gln Leu Leu Gly Gly Val Ser Ser Ile Asp  
35 40 45  
Ala Thr Gly Ser Pro Leu Thr Asp Glu Ala Leu Asn Ala Ala Lys Asn  
50 55 60  
Ala Asp Ala Val Leu Leu Gly Ala Ile Gly Gly Pro Lys Trp Gly Thr  
65 70 75 80  
Gly Ala Val Arg Pro Glu Gln Gly Leu Leu Arg Leu Arg Lys Glu Met  
85 90 95  
Gly Thr Phe Gly Asn Leu Arg Pro Cys Asn Phe Ala Ala Pro Ser Leu  
100 105 110  
Val Asp Gly Ser Pro Leu Arg Pro Glu Val Cys Arg Gly Val Asp Phe  
115 120 125  
Asn Ile Ile Arg Glu Leu Thr Gly Gly Ile Tyr Phe Gly Asp Arg Lys  
130 135 140  
Glu Asp Asp Gly Ser Gly Phe Ala Met Asp Thr Glu Pro Tyr Ser Arg  
145 150 155 160  
Ala Glu Ile Glu Arg Ile Thr Arg Leu Ala Ala His Leu Ala Leu Gln  
165 170 175  
His Asn Pro Pro Leu Pro Val Trp Ser Leu Asp Lys Ala Asn Val Leu  
180 185 190  
Ala Thr Ser Arg Leu Trp Arg Lys Thr Val Thr Glu Val Met Ala Lys  
195 200 205  
Glu Phe Pro Gln Leu Lys Val Glu His Gln Leu Ile Asp Ser Ala Ala  
210 215 220  
Met Ile Met Val Lys Glu Pro Arg Lys Leu Asn Gly Ile Val Val Thr  
225 230 235 240  
Ser Asn Leu Phe Gly Asp Ile Ile Ser Asp Glu Ala Ser Val Ile Pro  
245 250 255  
Gly Ser Leu Gly Leu Leu Pro Ser Ala Ser Leu Ser Gly Ile Pro Asp  
260 265 270  
Gly Lys Thr Lys Val Asn Gly Ile Tyr Glu Pro Ile His Gly Ser Ala  
275 280 285  
Pro Asp Ile Ala Gly Lys Gly Ile Val Asn Pro Val Ala Ala Ile Leu  
290 295 300  
Ser Val Ala Met Met Met Gln Tyr Ser Leu Asn Arg Met Asp Asp Ala  
305 310 315 320  
Arg Ala Ile Glu Thr Ala Val Arg Asn Val Ile Glu Ala Gly Ile Arg  
325 330 335  
Thr Ala Asp Ile Gly Gly Lys Ser Thr Thr Ser Glu Val Gly Asp Ala  
340 345 350  
Val Ala Ala Glu Leu Glu Lys Leu Leu Lys Gln  
355 360

<210> 42

<211> 18

<212> DNA

<213> Aspergillus Fumigatus

<400> 42

atgccttatct ccaagatc 18  
 <210> 43  
 <211> 15  
 <212> DNA  
 <213> Aspergillus Fumigatus  
 caggttgacg gcagt 15  
 <210> 44  
 <211> 18  
 <212> DNA  
 <213> Aspergillus Fumigatus  
 atggtaacta cttacaac 18  
 <210> 44  
 <211> 18  
 <212> DNA  
 <213> Aspergillus Fumigatus  
 tgaactaccc tgcaacgc 18  
 <210> 45  
 <211> 1233  
 <212> DNA  
 <213> Aspergillus Fumigatus  
 atgggttctg gatccggta tgacgatgac aagctcgccc ttatggtaac tacttacaac 60  
 atcctcgcc tccccggcga tgggatcggt cccgagggtca tgaccgaagc ggtcaagggt  
 ctaaaagggtct ttgagaacga gcacccaaag ttcaacctcc ggcaagagct catcgccggt  
 tgcagcatcg atgcgcacgg aaaatccgtc acagaagaag tgaaaaaggc cgctctggaa  
 tccgacccg tgcgttcgc agcagtcgga ggtcccaaattt gggaccatat ccgtcgttgt  
 ctgcacgggc cggaggggagg cctgctgcag ctccgcagg cgatggacat ctacgcgaat  
 ctcaggccgt gctcgccag ttcgcccagt gcgtcgatcg cgaaggagtt tagcccattc  
 cgccaggaaag tgatcgaggg cgttagattt gtcgttgta gggagaactg cgggggagcg  
 tatttcggga agaagatcga agaagaagat tatgcgttgg acgaatgggg ctatagcgag  
 cgcgagatcc agcgcatacc cccgccttcg gcgaaattt ccctccgtca caacccccc  
 tggcccgatca tctccctggaa caaaggccat gtgcgtgcct cgtcgcggct ctggcggcgc  
 gtcgttggaaa agaccatgac cactgagtat ccccgaggta agctcgtgca ccagctggca  
 gactcagcat cgctgattct agcgcaccaac cccgcggcat tgaacgggtg catcttggct  
 gacaacacat tcggcgacat gatttgcac caggccgggtt ccattcgatcg gacattgggc  
 gtgcgttccca gtgccagtct cgatggacta cccagtgaaa caagaaaagcg gacaaatggt  
 ctgtacgacg cgcacccatgg atctgcaccc acaattgcgg gccagaacat cgccaaacccc  
 gttgccatga tcctctgtgt ggctctcatg ttccgttattt cgcttagacat ggagaccgg  
 gcgcaacggc tcgaaaaaaggc agtgcagggt gttcttgatg ccgggatccg caccctgtat  
 ctgggtggga aatcggggac gaatgaagtt ggggatgcaa ttgttgcgtgc gttgcagggt  
 agttcaaagg gcgagcttga aggtaaagctt atccctaacc ctctcctcg tctcgattt  
 acgcgttaccg gtcatcatca ccatcaccat tga 1233  
 <210> 47  
 <211> 410  
 <212> PRT

<213> Aspergillus Fumigatus

<400> 47

Met Gly Ser Gly Ser Gly Asp Asp Asp Asp Lys Leu Ala Leu Met Val  
1 5 10 15  
Thr Thr Tyr Asn Ile Leu Val Leu Pro Gly Asp Gly Ile Gly Pro Glu  
20 25 30  
Val Met Thr Glu Ala Val Lys Val Leu Lys Val Phe Glu Asn Glu His  
35 40 45  
Arg Lys Phe Asn Leu Arg Gln Glu Leu Ile Gly Gly Cys Ser Ile Asp  
50 55 60  
Ala His Gly Lys Ser Val Thr Glu Glu Val Lys Lys Ala Ala Leu Glu  
65 70 75 80  
Ser Asp Ala Val Leu Phe Ala Ala Val Gly Gly Pro Lys Trp Asp His  
85 90 95  
Ile Arg Arg Gly Leu Asp Gly Pro Glu Gly Leu Leu Gln Leu Arg  
100 105 110  
Lys Ala Met Asp Ile Tyr Ala Asn Leu Arg Pro Cys Ser Ala Ser Ser  
115 120 125  
Pro Ser Ala Ser Ile Ala Lys Glu Phe Ser Pro Phe Arg Gln Glu Val  
130 135 140  
Ile Glu Gly Val Asp Phe Val Val Val Arg Glu Asn Cys Gly Gly Ala  
145 150 155 160  
Tyr Phe Gly Lys Ile Glu Glu Glu Asp Tyr Ala Met Asp Glu Trp  
165 170 175  
Gly Tyr Ser Glu Arg Glu Ile Gln Arg Ile Thr Arg Leu Ser Ala Glu  
180 185 190  
Ile Ala Leu Arg His Asn Pro Pro Trp Pro Val Ile Ser Leu Asp Lys  
195 200 205  
Ala Asn Val Leu Ala Ser Ser Arg Leu Trp Arg Arg Val Val Glu Lys  
210 215 220  
Thr Met Thr Thr Glu Tyr Pro Gln Val Lys Leu Val His Gln Leu Ala  
225 230 235 240  
Asp Ser Ala Ser Leu Ile Leu Ala Thr Asn Pro Arg Ala Leu Asn Gly  
245 250 255  
Val Ile Leu Ala Asp Asn Thr Phe Gly Asp Met Ile Ser Asp Gln Ala  
260 265 270  
Gly Ser Ile Val Gly Thr Leu Gly Val Leu Pro Ser Ala Ser Leu Asp  
275 280 285  
Gly Leu Pro Ser Glu Thr Arg Lys Arg Thr Asn Gly Leu Tyr Glu Pro  
290 295 300  
Thr His Gly Ser Ala Pro Thr Ile Ala Gly Gln Asn Ile Ala Asn Pro  
305 310 315 320  
Val Ala Met Ile Leu Cys Val Ala Leu Met Phe Arg Tyr Ser Leu Asp  
325 330 335  
Met Glu Thr Glu Ala Gln Arg Ile Glu Lys Ala Val Gln Gly Val Leu  
340 345 350  
Asp Ala Gly Ile Arg Thr Pro Asp Leu Gly Gly Lys Ser Gly Thr Asn  
355 360 365  
Glu Val Gly Asp Ala Ile Val Ala Ala Leu Gln Gly Ser Ser Lys Gly  
370 375 380  
Glu Leu Glu Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser  
385 390 395 400  
Thr Arg Thr Gly His His His His His His  
405 410

<210> 48

<211> 1443  
<212> DNA  
<213> *Aspergillus Fumigatus*

<400> 48  
atgggcgtcg gatccggta tgacgatgac aagctcgccc ttatgcctat ctccaagatc 60  
cacgctcggtt ccgtgtacga ctctcgcggt aacccccaccg ttgagggtgga cgttgtcacc 120  
gagaccgggtt tgcaccgtgc tattgttcct tctggagctt ccacccggca gcacgaggct 180  
cacgagctcc gtgacggta taagaccagg tggggcgca agggtgtcct caaggctgtc 240  
aagaatgtca acgagaccat tggccctgct ctcataagg agaacatcgta tgtgaaggac 300  
cagtctaagg tcgacgagtt ccttaacaagg ctgtacgggaa ctgccaaccaa gtccaaacctc 360  
ggtgctaattt ccatcctcggt tgtagcttg gctgttgcca aggctgggtc tgctgagaag 420  
ggtgccctc tctacgctca catctccgac cttggcgta ccaagaagcc ctatgtccctt 480  
cccgccccct tccagaacgt cctgaacggc ggctctcagc cccgggtgtcg cctcgctttc 540  
caggagttca tgatcgcccc ttgactccgtt ccctcttttcc cccggggccctt cccggccagggt 600  
gctgagggtct accagaagct caaggctcg gccaagaaga agtacggcca gtccgctggc 660  
aacgttggtg acgagggtgg ttgtgtccctt gatattcaga cccggccaggaa ggctctcgac 720  
ctgatcaccg aggccatcgta gcaggccggc tacaccggca agatcaagat cgctatggac 780  
gttgcctcca gcgagttcta caaggccgac gtcaagaagt acgacccttga cttcaagaac 840  
cccgagagcg accccctccaa gtggctcacc tacgaggcagc ttggccgacccctt ctacaagtcc 900  
cttgcgtccaa agtaccccat tgtagcattt gaggaccctt tcgctgagga tgattgggag 960  
gcctggagct acttctacaa gacctccgac ttccagattt ttgggtatgaa cctgactgtt 1020  
actaaccctg ggcgttatcaa gaaggccatc gagctcaagt cctgaaacgc cctccctgtcc 1080  
aaggtaacc agatcggtac cctcaccggag tccatccagg cccgcaaggaa ctcctacgcc 1140  
gacaactggg gtgtcatggt ctcccaccggc tctgggtgaga ctgaggacgtt caccattggc 1200  
gacattgtcg tccgtctcggtt ctctggccag atcaagaccg gtgctcccttgc cccgttccggag 1260  
cgtctggcta agctgaacca gatcctccgtt atcgaggagg agctcgccga gaatgccgtc 1320  
tacgctgggtt ccaagttcccg cactgcccgtc aacctgtggaa gcgagttga aggttaaggcct 1380  
atccctaacc ctctcctcggt tctcgatttctt acgcgttaccg gtcatcatca ccatcaccat 1440  
tqa

<210> 49  
<211> 480  
<212> PRT  
<213> Aspergillus Fumigatus

```

<400> 49
Met Gly Ser Gly Ser Gly Asp Asp Asp Asp Lys Leu Ala Leu Met Pro
      1           5           10          15
Ile Ser Lys Ile His Ala Arg Ser Val Tyr Asp Ser Arg Gly Asn Pro
      20          25          30
Thr Val Glu Val Asp Val Val Thr Glu Thr Gly Leu His Arg Ala Ile
      35          40          45
Val Pro Ser Gly Ala Ser Thr Gly Gln His Glu Ala His Glu Leu Arg
      50          55          60
Asp Gly Asp Lys Thr Gln Trp Gly Gly Lys Gly Val Leu Lys Ala Val
      65          70          75          80
Lys Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys Glu Asn Ile
      85          90          95
Asp Val Lys Asp Gln Ser Lys Val Asp Glu Phe Leu Asn Lys Leu Asp
      100         105         110
Gly Thr Ala Asn Lys Ser Asn Leu Gly Ala Asn Ala Ile Leu Gly Val
      115         120         125
Ser Leu Ala Val Ala Lys Ala Gly Ala Ala Glu Lys Gly Val Pro Leu
      130         135         140
Tyr Ala His Ile Ser Asp Leu Ala Gly Thr Lys Lys Pro Tyr Val Leu
      145         150         155         160

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Val | Pro | Phe | Gln | Asn | Val | Leu | Asn | Gly | Gly | Ser | His | Ala | Gly | Gly |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 175 |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     |     |
| Arg | Leu | Ala | Phe | Gln | Glu | Phe | Met | Ile | Val | Pro | Asp | Ser | Ala | Pro | Ser |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 190 |
|     |     |     |     | 180 |     |     |     |     | 185 |     |     |     |     |     |     |
| Phe | Ser | Glu | Ala | Leu | Arg | Gln | Gly | Ala | Glu | Val | Tyr | Gln | Lys | Leu | Lys |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 195 |
|     |     |     |     |     |     |     |     |     | 200 |     |     |     |     |     | 205 |
| Ala | Leu | Ala | Lys | Lys | Lys | Tyr | Gly | Gln | Ser | Ala | Gly | Asn | Val | Gly | Asp |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 210 |
|     |     |     |     |     |     |     |     |     | 215 |     |     |     |     |     | 220 |
| Glu | Gly | Gly | Val | Ala | Pro | Asp | Ile | Gln | Thr | Ala | Glu | Glu | Ala | Leu | Asp |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 225 |
|     |     |     |     |     |     |     |     |     | 230 |     |     |     |     |     | 240 |
| Leu | Ile | Thr | Glu | Ala | Ile | Glu | Gln | Ala | Gly | Tyr | Thr | Gly | Lys | Ile | Lys |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 245 |
|     |     |     |     |     |     |     |     |     | 250 |     |     |     |     |     | 255 |
| Ile | Ala | Met | Asp | Val | Ala | Ser | Ser | Glu | Phe | Tyr | Lys | Ala | Asp | Val | Lys |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 260 |
|     |     |     |     |     |     |     |     |     | 265 |     |     |     |     |     | 270 |
| Lys | Tyr | Asp | Leu | Asp | Phe | Lys | Asn | Pro | Glu | Ser | Asp | Pro | Ser | Lys | Trp |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 275 |
|     |     |     |     |     |     |     |     |     | 280 |     |     |     |     |     | 285 |
| Leu | Thr | Tyr | Glu | Gln | Leu | Ala | Asp | Leu | Tyr | Lys | Ser | Leu | Ala | Ala | Lys |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 290 |
|     |     |     |     |     |     |     |     |     | 295 |     |     |     |     |     | 300 |
| Tyr | Pro | Ile | Val | Ser | Ile | Glu | Asp | Pro | Phe | Ala | Glu | Asp | Asp | Trp | Glu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 305 |
|     |     |     |     |     |     |     |     |     | 310 |     |     |     |     |     | 320 |
| Ala | Trp | Ser | Tyr | Phe | Tyr | Lys | Thr | Ser | Asp | Phe | Gln | Ile | Val | Gly | Asp |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 325 |
|     |     |     |     |     |     |     |     |     | 330 |     |     |     |     |     | 335 |
| Asp | Leu | Thr | Val | Thr | Asn | Pro | Gly | Arg | Ile | Lys | Lys | Ala | Ile | Glu | Leu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 340 |
|     |     |     |     |     |     |     |     |     | 345 |     |     |     |     |     | 350 |
| Lys | Ser | Cys | Asn | Ala | Leu | Leu | Leu | Lys | Val | Asn | Gln | Ile | Gly | Thr | Leu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 355 |
|     |     |     |     |     |     |     |     |     | 360 |     |     |     |     |     | 365 |
| Thr | Glu | Ser | Ile | Gln | Ala | Ala | Lys | Asp | Ser | Tyr | Ala | Asp | Asn | Trp | Gly |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 370 |
|     |     |     |     |     |     |     |     |     | 375 |     |     |     |     |     | 380 |
| Val | Met | Val | Ser | His | Arg | Ser | Gly | Glu | Thr | Glu | Asp | Val | Thr | Ile | Ala |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 385 |
|     |     |     |     |     |     |     |     |     | 390 |     |     |     |     |     | 400 |
| Asp | Ile | Ala | Val | Gly | Leu | Arg | Ser | Gly | Gln | Ile | Lys | Thr | Gly | Ala | Pro |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 405 |
|     |     |     |     |     |     |     |     |     | 410 |     |     |     |     |     | 415 |
| Cys | Arg | Ser | Glu | Arg | Leu | Ala | Lys | Leu | Asn | Gln | Ile | Leu | Arg | Ile | Glu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 420 |
|     |     |     |     |     |     |     |     |     | 425 |     |     |     |     |     | 430 |
| Glu | Glu | Leu | Gly | Glu | Asn | Ala | Val | Tyr | Ala | Gly | Ser | Lys | Phe | Arg | Thr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 435 |
|     |     |     |     |     |     |     |     |     | 440 |     |     |     |     |     | 445 |
| Ala | Val | Asn | Leu | Lys | Gly | Glu | Leu | Glu | Gly | Lys | Pro | Ile | Pro | Asn | Pro |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 450 |
|     |     |     |     |     |     |     |     |     | 455 |     |     |     |     |     | 460 |
| Leu | Leu | Gly | Leu | Asp | Ser | Thr | Arg | Thr | Gly | His | His | His | His | His | His |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 465 |
|     |     |     |     |     |     |     |     |     | 470 |     |     |     |     |     | 475 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 480 |

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**